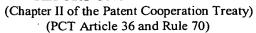
PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY





Applicant's or agent's file reference S-19	FOR FURTHER AC	TION	See Form PCT/IPEA/416				
International application No. PCT/JP2005/006000	International filing date (d	• •	Priority date (day/month/year) 23.03.2004				
	PCT/JP2005/006000 23.03.2005 23.03.2004 International Patent Classification (IPC) or national classification and IPC						
Int.Cl. F28F9/02 (2006. 01), B60H1/32 (2006. 01), F25B39/02 (2006. 01)							
Applicant							
SHOWA DENKO K.K.							
			y this International Preliminary Examining				
Authority under Article 35 and tra 2. This REPORT consists of a total of		•					
3. This report is also accompanied by		ncluding this cover s g:	sneet.				
a. a total of sheets, as follows:							
			een amended and are the basis of this report				
and/or sheets cor Administrative Ir		thorized by this Authori	ority (see Rule 70.16 and Section 607 of the				
	,	t which this Authority	considers contain an amendment that goes				
beyond the discle	osure in the international		as indicated in item 4 of Box No. I and the				
Supplemental Bo							
b. a total of (indicate type and number of electronic carrier(s)) containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).							
4. This report contains indications re	lating to the following it	ems:					
Box No. I Basis of the	ne report						
Box No. II Priority							
Box No. III Non-establis	tablishment of opinion with regard to novelty, inventive step and industrial applicability						
	of unity of invention						
	ed statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; s and explanations supporting such statement						
Box No. VI Certain docu	tain documents cited						
	ain defects in the international application						
Box No. VIII Certain observations on the international application							
Date of submission of the demand		Date of completion of this report					
16.09.2005		01.02.2006					
Name and mailing address of the IPEA/JP		Authorized officer	3M 3530				
Japan Patent Office		SHОЛ Hidefi	ımi				
3-4-3, Kasumigaseki, Chivoda-ku, Tokyo 100-8915, Japan		Telephone No. +81-3-3581-1101 Ext 3377					

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/JP2005/006000

Box No. I	Basis of the report		•			
the 🗀 a tr		nto	_ , which is the language of a			
furnishe	ard to the elements of the international applied to the receiving Office in response to an invitation not annexed to this report):					
☑ the	international application as originally filed/fu	rnished				
the pag	es*	received by this Authority on	as originally filed/furnished			
the Nos Nos Nos	.*	as amended (together with received by this Authority on received by this Authority on	as originally filed/furnished any statement) under Article 19			
sheets/fig			as originally filed/furnished			
sheets/fig		received by this Authority on				
sheets/fig	quence listing and/or any related table(s) - see	received by this Authority on	ence Listing.			
3. The	amendments have resulted in the cancellation	of:				
	the description, pages					
	the claims Nos					
	the drawings, sheets/figs					
			·			
mad	This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)). The description, pages					
	·		 .			
	the sequence listing (specify).					
* **	any table(s) related to sequence listing (specify): * If item 4 applies, some or all of those sheets may be marked "superseded."					
Tititem 4 ap	piles, some or all of those sheets may be marked	"superseded."				

IAP11 Rec'd PC 196589

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No. PCT/JP2005/006000

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement					
1. Statement	t				
Nove	elty (N)	Claims	1-19	YES	
		Claims		NO	
Inver	ntive step (IS)	Claims		YES	
		Claims	1-19	NO	
Indus	strial applicability (IA)	Claims	1-19	YES	
		Claims		NO NO	

2. Citations and explanations(Rule 70.7)

D1:JP 2003-075024 A (Showa Denko K.K.) 2003.03.12, paragraph 148, figure 15

D2:JP 2002-340495 A (Showa Denko K.K.) 2002.11.27, paragraph 44, figure

D3:JP 06-241614 A (Sharp K.K.) 1994.09.02, paragraphs 21-27, 37-39, figures 1,4

The subject matters of claim 1-3, 6, 13-19 do not appear to involve an inventive step in view of Document 1, and Document 2, cited in the ISR. The skilled person in the art would easily conceive the idea of applying the closing member 20 provided with the guide 24 in D2 to the heat exchanger 1 disclosed in D1.

The subject matters of claim 4-5, 7-12 do not appear to involve an inventive step in view of Document 1, Document 2, and Document 3, cited in the ISR. A guide having an inclined end face and a guide whose center is deviated from a center of an inlet portion are, as shown in D3, widely known among the skilled person in the art.